

**Amendments to the Claims**

This listing of claims replaces all prior versions, and listings, of the claims in the application.

**Listing of Claims:**

Claims 1-518 (Canceled)

519. (Currently Amended) A kit comprising:

a probe molecule for use in determining the presence of ~~[[a]]~~ an RNA target ~~[[nucleic acid sequence]]~~ in a sample, the probe comprising complementary first and second base regions that form a hybrid containing at least one 2'-O-alkyl ribonucleotide ~~modified to include a 2'-O-alkyl substitution to the ribofuranosyl moiety~~, wherein the probe forms a stable complex with the RNA target ~~[[nucleic acid sequence]]~~ but not with a non-targeted nucleic acid under nucleic acid assay conditions, such that the RNA target ~~[[nucleic acid sequence]]~~ can be detected, and wherein the complex comprises a single-stranded form of the probe; and

a solid support for immobilizing the RNA target ~~[[nucleic acid sequence]]~~ so that unbound nucleic acids and other components of the sample can be removed from the RNA target ~~[[nucleic acid sequence]]~~.

520. (Previously Presented) The kit of claim 519, wherein the solid support has a magnetic charge.

521. (Currently Amended) The kit of claim 519 further comprising:

~~[[a]]~~ one or more nucleic acid ~~[[polymerase]]~~ polymerases;  
nucleotide triphosphates; and

~~[[an]]~~ one or more amplification ~~[[oligonucleotide which]]~~ oligonucleotides, wherein each of said amplification oligonucleotides is, in the presence of a nucleic acid analyte and under amplification conditions, ~~[[is]]~~ extended to form part of a nucleic acid extension product containing

the RNA target [[nucleic acid sequence]] or directs the synthesis of a nucleic acid transcription product containing the RNA target [[nucleic acid sequence]].

522. (Currently Amended) The kit of claim 519, wherein the first base region contains at least one 2'-O-alkyl ribonucleotide ~~modified to include a 2'-O-alkyl substitution to the ribofuranosyl moiety~~, and wherein the first base region complexes with the RNA target [[nucleic acid sequence]] under the nucleic acid assay conditions.

523. (Currently Amended) The kit of claim 519, wherein that portion of the first base region which hybridizes to the second base region includes a cluster of at least [[about]] 4 2'-O-alkyl ribonucleotides ~~modified to include a 2'-O-alkyl substitution to the ribofuranosyl moiety~~.

524. (Currently Amended) The kit of claim 523, wherein the first base region complexes with the RNA target [[nucleic acid sequence]] under the nucleic acid assay conditions.

525. (Currently Amended) The kit of claim 519, wherein that portion of the first base region which hybridizes to the second base region includes at least one nucleotide which is not a 2'-O-alkyl ribonucleotide ~~modified to include a 2'-O-alkyl substitution to the ribofuranosyl moiety~~.

526. (Currently Amended) The kit of claim 525, wherein the first base region complexes with the RNA target [[nucleic acid sequence]] under the nucleic acid assay conditions.

527. (Currently Amended) The kit of claim 519, wherein each nucleotide of that portion of the first base region which hybridizes to the second base region is a 2'-O-alkyl ribonucleotide ~~modified to include a 2'-O-alkyl substitution to the ribofuranosyl moiety~~.

528. (Currently Amended) The kit of claim 527, wherein the first base region complexes with the RNA target [[nucleic acid sequence]] under the nucleic acid assay conditions.

529. (Currently Amended) The kit of claim 519, wherein each nucleotide of the probe is a 2'-O-alkyl ribonucleotide ~~modified to include a 2'-O-alkyl substitution to the ribofuranosyl moiety.~~

530. (Currently Amended) The kit of claim 519, wherein the first and second base regions form a hybrid that is more stable than a hybrid formed between unmodified forms of the first and second base regions consisting of RNA and/or DNA.

531. (Previously Presented) The kit of claim 519, wherein the probe includes a conjugate molecule.

532. (Previously Presented) The kit of claim 523, wherein the probe includes a conjugate molecule joined to the probe at a site located within the cluster of the first base region.

533. (Previously Presented) The kit of claim 519, wherein the first and second base regions are contained within an oligonucleotide that is between 10 and 100 bases in length.

534. (Previously Presented) The kit of claim 519, wherein the probe comprises a detectable label.

535. (Previously Presented) The kit of claim 534, wherein the detectable label comprises a fluorescent molecule.

536. Canceled

537. (Currently Amended) The kit of claim ~~[[536]]~~ 519, wherein the RNA target is ribosomal RNA.

538. (Currently Amended) The kit of claim ~~[[536]]~~ 519, wherein ~~a target sequence contained within the target nucleic acid includes a double-stranded region~~ the probe forms a stable complex with a region of the RNA target that is folded under the nucleic acid conditions.

539. (Currently Amended) The kit of claim 519, wherein the at least one 2'-O-alkyl ribonucleotide ~~[[substitution to the ribofuranosyl moiety]]~~ is a 2'-O-methyl ~~[[substitution]]~~ ribonucleotide.

540. (Currently Amended) A reaction mixture comprising:  
one or more amplification oligonucleotides in the presence of at least one nucleic acid polymerase and nucleotide triphosphates sufficient to form ~~[[a nucleic acid]]~~ an RNA amplification product; and  
a probe molecule comprising first and second base regions hybridized to each other and having at least one 2'-O-alkyl ribonucleotide ~~modified to include a 2'-O-alkyl substitution to the ribofuranosyl moiety~~, wherein the probe forms a stable and detectable complex with the amplification product but not with non-target nucleic acid, and wherein the complex comprises a single-stranded form of the probe.

541. (Previously Presented) The reaction mixture of claim 540, wherein the one or more amplification oligonucleotides and the probe are present in the reaction mixture when the amplification reaction is initiated.

542. (Currently Amended) The reaction mixture of claim 540, wherein the first base region contains at least one 2'-O-alkyl ribonucleotide ~~modified to include a 2'-O-alkyl substitution to the ribofuranosyl moiety~~, and wherein the first base region ~~[[complexes]] with the target nucleic acid sequence under the nucleic acid assay conditions~~ forms a complex with the amplification product.

543. (Currently Amended) The reaction mixture of claim 540, wherein that portion of the first base region which hybridizes to the second base region includes a cluster of at least ~~[[about]]~~ 4 2'-O-alkyl ribonucleotides ~~modified to include a 2'-O-alkyl substitution to the ribofuranosyl moiety~~.

544. (Currently Amended) The reaction mixture of claim 543, wherein the first base region ~~complexes with the target nucleic acid sequence under the nucleic acid assay conditions~~ forms a complex with the amplification product.

545. (Currently Amended) The reaction mixture of claim 540, wherein that portion of the first base region which hybridizes to the second base region includes at least one nucleotide which is not a 2'-O-alkyl ribonucleotide ~~modified to include a 2'-O-alkyl substitution to the ribofuranosyl moiety~~.

546. (Currently Amended) The reaction mixture of claim 545, wherein the first base region ~~complexes with the target nucleic acid sequence under the nucleic acid assay conditions~~ forms a complex with the amplification product.

547. (Currently Amended) The reaction mixture of claim 540, wherein each nucleotide of that portion of the first base region which hybridizes to the second base region is a 2'-O-alkyl ribonucleotide ~~modified to include a 2'-O-alkyl substitution to the ribofuranosyl moiety~~.

548. (Currently Amended) The reaction mixture of claim 547, wherein the first base region ~~complexes with the target nucleic acid sequence under the nucleic acid assay conditions~~ forms a complex with the amplification product.

549. (Currently Amended) The reaction mixture of claim 540, wherein each nucleotide of the probe is a 2'-O-alkyl ribonucleotide ~~modified to include a 2'-O-alkyl substitution to the ribofuranosyl moiety.~~

550. (Currently Amended) The reaction mixture of claim 540, wherein the first and second base regions form a hybrid that is more stable than a hybrid formed between unmodified forms of the first and second base regions consisting of RNA and/or DNA.

551. (Previously Presented) The reaction mixture of claim 540, wherein the probe includes a conjugate molecule.

552. (Previously Presented) The reaction mixture of claim 543, wherein the probe includes a conjugate molecule joined to the probe at a site located within the cluster of the first base region.

553. (Previously Presented) The reaction mixture of claim 540, wherein the first and second base regions are contained within an oligonucleotide that is between 10 and 100 bases in length.

554. (Previously Presented) The reaction mixture of claim 540, wherein the probe comprises a detectable label.

555. (Previously Presented) The reaction mixture of claim 554, wherein the detectable label comprises a fluorescent molecule.

556. Canceled

557. (Currently Amended) The reaction mixture of claim [[556]] 540, wherein the [[RNA is]] the amplification product is formed from a ribosomal RNA.

558. (Currently Amended) The reaction mixture of claim [[556]] 540, wherein ~~a target sequence contained within the target nucleic acid includes a double-stranded region~~ the probe forms a stable complex with a folded region of the amplification product.

559. (Currently Amended) The reaction mixture of claim 540, wherein the at least one 2'-O-alkyl [[substitution to the ribofuranosyl moiety]] ribonucleotide is a 2'-O-methyl [[substitution]] ribonucleotide.

560. (New) The kit of claim 521, wherein the nucleic acid polymerases and amplification oligonucleotides are sufficient to perform a transcription-based amplification reaction.

561. (New) The reaction mixture of claim 540, wherein the amplification oligonucleotides and the at least one nucleic acid polymerase are sufficient to perform a transcription-based amplification reaction.

562. (New) The kit of claim 538, wherein the kit does not include helper probes.

563. (New) The reaction mixture of claim 558, wherein the reaction mixture does not include helper probes.

564. (New) The kit of claim 538, wherein the probe includes at least 5 contiguous 2'-O-alkyl ribonucleotides.

565. (New) The reaction mixture of claim 558, wherein the probe includes at least 5 contiguous 2'-O-alkyl ribonucleotides.

566. (New) The kit of claim 538, wherein the RNA target is ribosomal RNA.

567. (New) The reaction mixture of claim 558, wherein the amplification product is formed from a ribosomal RNA.